

REMARKS

This amendment is in response the Office Action mailed on June 3, 2004. Claims 1-11, 13-16, 18-25, 27-29, 31-39 and 41 are rejected under 35 U.S.C. § 103(a) from Bunin et al. U.S. Patent No. 5,907,651 in view of Yanagawa et al. U.S. Patent No. 5,297,228. In addition, claims 12 and 26 are rejected under 35 U.S.C. §103(a) from Bunin and Yangawa in view of Applicants Admitted Prior Art (AAPA). Claims 1, 21 and 33 are objected to as allegedly having claim limitations with insufficient antecedent basis.

The Examiner maintained the above rejections from the prior Office Action, which were sent on April 15, 2004. Although Applicants disagree with the Examiner's objection to the claims, Applicants have removed the particular claim limitation objected to by the Examiner.

It is respectfully submitted that there are elements of Applicant's invention that are not taught, suggested or implied by Bunin either singly or in combination with the other cited references. In particular, in response to the Examiner's rejection of the claims under 35 U.S.C. § 103(a) from Bunin et al., claim 1 now recites, *inter alia*, "the pin passages and projecting pins being precisely sized to eliminate play between the pin passages and projecting pins when the projecting pins are inserted into the pin passages." Claim 21 now recites, *inter alia*, "predetermined alignment patterns etched into the substrate body using a photolithographic process." Finally, claim 33 now recites, *inter alia*, "forming a wafer having a plurality of aligned respective channels chemically etched therein." Support for the claim amendments may be found on page 11, line 22 to page 12, line 2 and page 10, lines 5-11 of Applicant's specification.

Furthermore, Bunin actually teaches away from Applicant's invention. As can be seen from Applicant's disclosure and as is commonly known in the art, one of the key requirements in fiber optic connections is the accuracy in which the optical fibers are aligned. Bunin teaches and claims an alignment bushing placed in the pin passage and an adhesive surrounding the alignment bushing (col. 7, lines 13-35). The bushings expand to enable insertion of the posts. This type of operation inherently introduces inaccuracy in alignment because of the nature of the expansion of the bushing.

In contrast, Applicant's invention does away completely with bushings and adhesives in the pin passage area and uses precise sizing of the pins and the passageways to ensure that the pins sit securely within the passageways. By doing so, any type of movement or shifting of the pins is eliminated. Therefore, unlike Bunin, the pin passageways in Applicant's invention do not expand to accommodate the pins, thereby eliminating any inaccuracies caused by the expanding bushing.

In addition, there is no teaching or suggestion in the cited references that the alignment channels or patterns are etched into the substrate. Etching is a highly precise method of chemically forming channels in the substrate, which is as precise as the crystalline structure of the substrate itself. In contrast, the cited art (Yanagawa) discusses cutting grooves or channels into the substrate (col. 7, lines 30-55). This is a relatively highly inaccurate way of forming channels.

Based on the above claim amendments and remarks, reconsideration and withdrawal of the rejections are respectfully requested. This application is believed to now be in condition for allowance upon entry of the presently amended claims.

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Respectfully submitted,

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